

EVALUATION OF AN EVIDENCE-BASED THROAT-PAIN PROTOCOL TO REDUCE LEFT-WITHOUT-BEING-SEEN, LENGTH OF STAY, AND ANTIBIOTIC PRESCRIBING

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Contribution to Emergency Nursing Practice:

- With increasing wait times across the country, it is important to consider all time-saving strategies to improve ED throughput, such as a nurse-initiated throat-pain protocol.
- Adoption of practices that support diagnostics testing early in the patient visit decreases the number of patients who leave without being seen.
- Nursing application of a throat-pain protocol increases adherence to clinical practice guidelines and improves antibiotic stewardship.

Abstract

Background: Increasing numbers of people are seeking unscheduled medical care in United States' emergency departments, which contributes to delayed throughput and increased patient length of stay. Implementation of nurse-initiated protocols, such as those for throat pain, initiates early diagnostic testing, optimizes patient throughput strategies, and promotes adherence to clinic practice guidelines for an additional segment of patients.

Aim: To evaluate the effect of an evidence-based throat-pain protocol.

Methods: The medical records for 117 patients presenting with throat pain to the emergency department were reviewed and separated into 3 groups: no testing, medical provider-initiated testing, or nurse-initiated testing using the protocol. Main outcome variables were number of patients that left without being seen (LWBS), patient length of stay, and antibiotic prescribing.

Results: No patients LWBS from the nurse-initiated testing group or no-testing group compared with 3% from the medical provider-initiated group. By eliminating these LWBS patients, there is a potential cost savings of \$3,420 over a 12-month period. The overall mean length of stay was 6 minutes shorter in the nurse-initiated group than the other 2 groups evaluated. Antibiotic prescriptions were given for 48% of patients in the protocol group compared with 52% in the medical provider group and 70% in the no-testing group.

Conclusion: Although this department has only partially implemented a protocol for throat pain, it highlights the benefits to reduce the number of patients that LWBS and reduce patient length of stay. The use of the protocol also improved adherence to clinical practice guidelines for testing and antibiotic prescribing.

Key words: Protocol; Standing order; Emergency services; Left without being seen; Length of stay

The emergency department may be distinguished from other areas in health care by a wide range of patient acuity that presents for unscheduled

medical care in an environment of competing priorities and a fixed number of resources. Patients who present to emergency departments with the chief complaint of throat pain pose a unique challenge to patient throughput related to assignment of low acuity and the potential for additional time required for processing of specimens. Also, because of the nonspecific clinical features of group A streptococcal (GAS) pharyngitis, authorities have generally recommended laboratory confirmation of the presence of GAS before treatment with antibiotics.¹⁻⁵ However, the literature reports that many providers prescribe empiric antibiotic treatment based on symptoms alone, often overprescribing without confirmation of GAS infection,

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and that accurate diagnosis on the basis of clinical grounds alone is usually impossible.^{3,4,6}

In the emergency department, protocols allow nursing staff to initiate appropriate diagnostic, therapeutic, and patient-management regimens before provider examination for specific patient presentations. The purpose of this project was to evaluate the use of an evidence-based protocol for patients presenting to the emergency department with throat pain to determine the effect on the number of patients who left without being seen (LWBS), patient length of stay, and appropriate antibiotic prescribing.

Methods

The intervention took place in our not-for-profit, community hospital with 176 licensed inpatient beds located in central Virginia. The emergency department has 29 staffed treatment beds that provide nontrauma, emergency, and medical services for approximately 50,000 ED visits annually. This emergency department has 2 treatment areas. The main emergency department is open 24 hours a day and provides treatment to all levels of acuity; the ancillary treatment area is designated for minor emergency care (MEC) and operates between 11:00 and 21:00 daily.

A convenience sample was drawn from all ED patients, 3 years of age and older, who presented for medical care during a 90-day period. Centor and McIsaac criteria are not validated for use in children below the age of 3 (Table 1).⁴

Patients were identified through a medical records search. Chief complaints of throat pain and sore throat were included if the diagnosis was listed as one of the following: acute pharyngitis, acute viral pharyngitis, viral pharyngitis, acute streptococcal pharyngitis, acute bacterial tonsillitis, acute tonsillitis, strep throat, exposure to strep throat, exudative pharyngitis, or scarlet fever.

During the training period, approximately 81% of nurses working in the emergency department who provide bedside care or assignment to the triage area were trained to the use of the throat pain protocol in small groups and/or 1-on-1. Visual aids and reference handouts were designed to train staff to assess Centor and McIsaac criteria correctly, the proper technique for the collection of specimens, and documentation of the throat-pain score. The handout was e-mailed to all ED staff members who provide bedside care, with copies of the training readily available for clinical reference.

The investigator identified medical records for inclusion using the reports generator feature in the electronic medical record (EMR). Reports were generated using the documented chief complaint and diagnosis to identify a greater number of eligible records. An Institutional Review Board waiver was obtained before project procedures were initiated.

Following implementation of the protocol, demographic measures were collected from eligible medical records as well as outcome data points. Centor and McIsaac scoring criteria were used to assess and grade throat pain. Numerous professional organizations endorse the use of the Centor clinical scoring scale to assess the risk of GAS and

TABLE 1

Throat-pain protocol

• Only order rapid strep test (RST) for patients who score 2 or more points using the Centor (and McIsaac) criteria.^{2,7}

Criteria	Point
• Temperature > 38°C (100.4°F)	1
• No cough	1
• Tender anterior cervical adenopathy	1
• Tonsillar swelling or exudate	1
• Age 3–14 years	1
• Age 15–44 years	0
• Age ≥ 45 years	-1
	Total Score: _____
• RST specimen collection	
– Use the 2-swab specimen process provided in the kit	
– Collect and send RST and throat culture specimens to lab	

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